



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0803; Directorate Identifier 2011-NM-214-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede an existing airworthiness directive (AD) that applies to all The Boeing Company Model 777-200, -200LR, -300, and -300ER series airplanes. The existing AD currently requires repetitive inspections for cracking of the elevator actuator fittings. Since we issued that AD, the manufacturer has developed a modification that was approved as an optional terminating action to the currently required repetitive inspections. We have been advised that the modification procedures include certain incorrect torque values. This proposed AD would require, for previously modified airplanes, repetitive inspections for movement of the fittings or fastener heads, and eventual replacement of certain bolts (including related investigative and corrective actions if necessary). For all airplanes, this replacement, with corrected torque values, would terminate the requirements of the AD. This proposed AD would also remove certain airplanes from the applicability. We are proposing this AD to detect and correct a cracked actuator fitting or incorrectly installed bolts to the actuator fitting, which could lead to the elevator becoming detached and unrestrained, and a consequent unacceptable flutter condition and loss of control of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Melanie Violette, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 985057-3356; phone: 425-917-6422; fax: 425-917-6590; e-mail: melanie.violette@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-0803; Directorate Identifier 2011-NM-214-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

On December 10, 2007, we issued AD 2007-26-05, Amendment 39-15307 (72 FR 71212, December 17, 2007), for all Boeing Model 777-200, -200LR, -300, and -300ER series airplanes. That AD requires initial and repetitive inspections for cracking of the elevator actuator fittings, and replacement of any cracked fitting with a new fitting. That AD resulted from a report of a cracked left elevator actuator fitting. We issued that AD to detect and correct a cracked actuator fitting, which could detach from the elevator and lead to an unrestrained elevator and an unacceptable flutter condition, and consequent loss of airplane control.

Actions Since Existing AD Was Issued

The preamble to AD 2007-26-05, Amendment 39-15307 (72 FR 71212, December 17, 2007), specifies that we consider the requirements “interim action” and that the manufacturer is developing a modification to address the unsafe condition. AD 2007-26-05 also explains that we might consider further rulemaking if a modification is developed, approved, and available. The manufacturer developed such a modification, which is specified in Boeing Alert Service Bulletin 777-55A0016, dated October 27, 2009. We issued an alternative method of compliance (AMOC) specifying that the optional accomplishment of the actions specified in Boeing Alert Service Bulletin 777-55A0016, dated October 27, 2009, terminate the requirements of AD 2007-26-05. Boeing Alert Service Bulletin 777-55A0016, dated October 27, 2009, however, specified incorrect torque values for the BACB30NR4K6 and BACB30NR4K7 bolts, which could recreate the original unsafe condition. We have thus determined that further rulemaking is necessary to address this potentially reintroduced unsafe condition.

Relevant Service Information

We reviewed Boeing Alert Service Bulletin 777-55A0016, Revision 1, dated August 25, 2011, which describes procedures for replacing the elevator actuator fitting assemblies with new assemblies, and torquing the bolts with correct torque values, which eliminates the need for the repetitive inspections required by AD 2007-26-05, Amendment 39-15307 (72 FR 71212, December 17, 2007).

Boeing Alert Service Bulletin 777-55A0016, Revision 1, dated August 25, 2011, also describes additional work for airplanes that were modified using Boeing Alert Service Bulletin 777-55A0016, dated October 27, 2009, which specified certain incorrect fastener torque values. For those airplanes that were modified using the incorrect torque values, Boeing Alert Service Bulletin 777-55A0016, Revision 1, dated August 25, 2011, also describes procedures for repetitive detailed inspections for movement of the fastener heads and the fittings along the spar web of the elevator actuator fitting assemblies, and

eventual replacement of the 12 bolts common to the elevator actuator fitting and the spar web (including related investigative and corrective actions), which eliminates the need for the repetitive inspections. Related investigative actions include a detailed inspection for fitting damage, a detailed inspection of the composite spar web for damage, and an ultrasonic inspection for cracks, delaminations, and damage. Corrective actions include contacting Boeing and doing the repairs.

We also reviewed Boeing Service Bulletin 777-55A0015, Revision 3, dated November 24, 2009, which describes the same actions as Boeing Alert Service Bulletin 777-55A0015, dated April 19, 2007 (which was cited in AD 2007-26-05, Amendment 39-15307 (72 FR 71212, December 17, 2007), as the appropriate source of service information for the required actions), and adds an optional terminating action for certain inspection requirements using Boeing Alert Service Bulletin 777-55A0016, dated October 27, 2009.

Differences between Proposed Rule and Service Bulletin

Boeing Alert Service Bulletin 777-55A0016, Revision 1, dated August 25, 2011, specifies to contact the manufacturer for instructions on how to repair certain conditions, but this proposed AD would require repairing those conditions in one of the following ways:

- In accordance with a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

Proposed AD Requirements

This proposed AD would retain all requirements of AD 2007-26-05, Amendment 39-15307 (72 FR 71212, December 17, 2007). This proposed AD would remove new production airplanes from the applicability. This proposed AD would also require accomplishing the actions specified in the service information described previously.

Change to Existing AD

This proposed AD would retain all requirements of AD 2007-26-05, Amendment 39-15307 (72 FR 71212, December 17, 2007). Since AD 2007-26-05 was issued, the AD format has been revised, and certain paragraphs have been rearranged. As a result, the corresponding paragraph identifier has changed in this proposed AD, as listed in the following table:

Revised paragraph identifiers	
Requirement in existing AD 2007-26-05, Amendment 39-15307 (72 FR 71212, December 17, 2007))	Corresponding requirement in this proposed AD
Paragraph (f)	paragraph (g)

Costs of Compliance

We estimate that this proposed AD affects 139 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

Estimated costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection (retained actions from AD 2007-26-05, Amendment 39-15307 (72 FR 71212, December 17, 2007))	10 work-hours X \$85 per hour = \$850 per inspection cycle	\$0	\$850 per inspection cycle	\$118,150 per inspection cycle

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection (new proposed action)	14 work-hours X \$85 per hour = \$1,190 per inspection cycle	\$0	\$1,190	Up to \$165,410 per inspection cycle

We estimate the following costs to do any necessary replacements that would be required based on the results of the proposed inspections. We have no way of determining the number of aircraft that might need these replacements:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Fitting replacement	132 work-hours X \$85 per hour = \$11,220	\$21,643	\$32,863
Bolt replacement	105 work-hours X \$85 per hour = \$8,925	\$65	\$8,990

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2007-26-05, Amendment 39-15307 (72 FR 71212, December 17, 2007), and adding the following new AD:

The Boeing Company: Docket No. FAA-2012-0803; Directorate Identifier 2011-NM-214-AD.

(a) Comments Due Date

The FAA must receive comments on this AD action by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD supersedes AD 2007-26-05, Amendment 39-15307 (72 FR 71212, December 17, 2007).

(c) Applicability

This AD applies to The Boeing Company Model 777-200, -200LR, -300, and -300ER series airplanes; certificated in any category, as identified in Boeing Alert Service Bulletin 777-55A0016, Revision 1, dated August 25, 2011.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 55, Stabilizers.

(e) Unsafe Condition

This AD was prompted by a report of a cracked left elevator actuator fitting, and the recent determination that certain incorrect torque values had been specified for an alternative method of compliance intended to terminate the requirements of the existing AD. We are issuing this AD to detect and correct a cracked actuator fitting or incorrectly installed bolts to the actuator fitting, which could lead to the elevator becoming detached and unrestrained, and a consequent unacceptable flutter condition and loss of control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Retained Inspections and Corrective Actions with No Changes

This paragraph restates the inspections and corrective actions required by paragraph (f) of AD 2007-26-05, Amendment 39-15307 (72 FR 71212, December 17, 2007), with no changes.

(1) Do all inspections and actions described in paragraphs (g)(1) and (g)(2) of this AD, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-55A0015, dated April 19, 2007; or Boeing Alert Service Bulletin 777-55A0015, Revision 3, dated November 24, 2009. As of the effective date of this AD, Boeing Alert Service Bulletin 777-55A0015, Revision 3, dated November 24, 2009, must be used to accomplish the actions required by this paragraph. At the applicable time specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 777-55A0015, dated April 19, 2007, except as provided by paragraph (g)(3) of this AD, do an initial dye penetrant or high-frequency eddy current (HFEC) inspection for cracking of the elevator actuator fittings, and, thereafter, do repetitive dye penetrant, HFEC, or detailed inspections at the applicable times specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 777-55A0015, dated April 19, 2007.

(2) Before further flight, replace any fitting found to be cracked during any inspection required by paragraph (g)(1) of this AD with a new fitting having the same part number, or an optional part number as identified in Boeing Alert Service Bulletin 777-55A0015, dated April 19, 2007; or Boeing Service Bulletin 777-55A0015, Revision 3, dated November 24, 2009. Thereafter, do initial and repetitive inspections of the replacement fitting at the time specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 777-55A0015, dated April 19, 2007.

(3) Where Boeing Alert Service Bulletin 777-55A0015, dated April 19, 2007, specifies a compliance time after the date on that service bulletin, this AD requires compliance within the specified compliance time after January 22, 2008 (the effective date of AD 2007-26-05, Amendment 39-15307 (72 FR 71212, December 17, 2007)).

(h) New Additional Actions for Certain Airplanes

For airplanes on which the elevator actuator fitting assemblies have been replaced in accordance with and using the fastener torque values specified in Boeing Alert Service Bulletin 777-55A0016, dated October 27, 2009: Within 180 days after the effective date of this AD, do a detailed inspection of the elevator actuator fitting assemblies to detect discrepancies (including indications of fastener head movement, and fitting movement along the spar web), in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-55A0016, Revision 1, dated August 25, 2011.

(1) If no discrepancy is detected, do the actions specified in paragraphs (h)(1)(i) and (h)(1)(ii) of this AD:

(i) Repeat the inspection thereafter at intervals not to exceed 90 days or 360 flight cycles, whichever occurs first, until the actions specified in paragraph (h)(1)(ii) are done.

(ii) Within 4,200 flight cycles or 750 days after the effective date of this AD, whichever occurs first, replace the 12 bolts common to the elevator actuator fitting and the spar web, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-55A0016, Revision 1, dated August 25, 2011, except as provided by paragraph (j) of this AD. Do all applicable related investigative and corrective actions before further flight. The replacement of all 12 bolts in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-55A0016, Revision 1, dated August 25, 2011, terminates the requirements of this AD for that fitting only.

(2) If any discrepancy is detected, before further flight, replace the 12 bolts common to the elevator actuator fitting and the spar web using new parts, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-55A0016, Revision 1, dated August 25, 2011, except as provided by paragraph (j) of this AD. Do all applicable related investigative and corrective actions before further flight. The replacement of all 12 bolts in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-55A0016, Revision 1, dated August 25, 2011, terminates the requirements of this AD for that fitting only.

(i) New Optional Replacement of Elevator Actuator Fitting Assembly

For airplanes on which the elevator actuator fitting assemblies have not been replaced in accordance with Boeing Alert Service Bulletin 777-55A0016, dated October 27, 2009: Replacement of these fitting assemblies with new parts, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-55A0016, Revision 1, dated August 25, 2011, except as provided by paragraph (j) of this AD, terminates the requirements of this AD.

(j) Exception

If any discrepancy or cracking is found during any inspection required by this AD, and Boeing Alert Service Bulletin 777-55A0016, Revision 1, dated August 25, 2011, specifies to contact Boeing for appropriate action: Before further flight, repair, using a method approved in accordance with the procedures specified in paragraph (l) of this AD.

(k) Credit for Previous Actions

(1) This paragraph provides credit for inspecting and replacing the elevator actuator fitting assemblies, as required by paragraphs (h) and (i) of this AD, if the replacement was performed before the effective date of this AD using Boeing Alert Service Bulletin 777-55A0016, dated October 27, 2009, and using the correct torque

values as specified in Boeing Alert Service Bulletin 777-55A0016, Revision 1, dated August 25, 2011.

(2) This paragraph provides credit for inspecting and replacing actuator fittings, as required by paragraph (g) of this AD, if the inspection and replacement was performed before the effective date of this AD using the service bulletins specified in paragraphs (k)(2)(i) and (k)(2)(ii) of this AD and using the correct torque values as specified in Boeing Alert Service Bulletin 777 55A0016, Revision 1, dated August 25, 2011.

(i) Boeing Service Bulletin 777-55A0015, Revision 1, dated January 31, 2008.

(ii) Boeing Service Bulletin 777-55A0015, Revision 2, dated December 4, 2008.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be e-mailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by The Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved for AD 2007-26-05, Amendment 39-15307 (72 FR 71212, December 17, 2007), are not approved as AMOCs for this AD.

(m) Related Information

(1) For more information about this AD, contact Melanie Violette, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 985057-3356; phone: 425-917-6422; fax: 425-917-6590; e-mail: melanie.violette@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington 985057-3356. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on July 25, 2012.

Kalene C. Yanamura,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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